

Symposium Spin Properties of Graphene (SYSG)

jointly organized by
 the Semiconductor Physics Division (HL),
 the Thin Films Division (DS),
 the Magnetism Division (MA),
 the Surface Science Division (O),
 and the Low Temperature Physics Division (TT)

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Since graphene has low spin-orbit coupling and the most abundant constituent atom has no nuclear spin, very long spin relaxation and coherence times are expected. Moreover, graphene can be rendered magnetic, at least theoretically, by introducing vacancies or zig-zag edges. Thus, graphene might be a favorable material for spintronic applications, in particular, in combination with its high mobility, transparency, chemical inertness, and extremely large breaking strength. However, current experiments show spin relaxation times of at maximum 2 ns and the magnetic properties are still under debate. The symposium will wrap up the current state of the art concentrating on the possible extrinsic origins for the small relaxation times and the magnetism induced by ion bombardment.

Overview of Invited Talks and Sessions

(Lecture room: HSZ 02)

Invited Talks

SYSG 1.1	Tue	9:30–10:00	HSZ 02	Intrinsic magnetism in graphene — ●IRINA GRIGORIEVA
SYSG 1.2	Tue	10:00–10:30	HSZ 02	Defect Induced Magnetic Moments in Graphene — ●ROLAND KAWAKAMI
SYSG 1.3	Tue	10:30–11:00	HSZ 02	Role of MgO barriers for spin and charge transport in Co/MgO/graphene spin-valve devices — ●BERND BESCHOTEN
SYSG 1.4	Tue	11:15–11:45	HSZ 02	Defect-Mediated Spin Relaxation and Dephasing in Graphene — MARK LUNDEBERG, SILVIA FOLK, ●JOSHUA FOLK
SYSG 1.5	Tue	11:45–12:15	HSZ 02	Electron spin relaxation in graphene: resonant scattering off local magnetic moments — ●JAROSLAV FABIAN, DENIS KOCHAN, MARTIN GMITRA

Sessions

SYSG 1.1–1.5	Tue	9:30–12:15	HSZ 02	Spin Properties of Graphene
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